

# Natural Hazards Mitigation Plan (NHMP)

City of Richland

2003

Prepared by

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ECO Resource Group



## **Executive Summary**

The City of Richland's Natural Hazards Mitigation Plan (NHMP) identifies resources and presents information to assist city residents, public and private sector organizations, and others interested in participating in planning for natural hazards. The Mitigation Plan provides a list of activities that may assist the City of Richland in reducing risk and preventing loss from future natural hazard events. The action items address multi-hazard issues, as well as specific activities for floods, windstorms, wildfires, severe winter storms, landslides, earthquakes, and volcanic eruption hazards.

### **Plan Goals**

The City of Richland has identified the following goals for this Hazard Mitigation Plan:

**Goal #1: PROTECT LIFE AND PROPERTY** by lessening the potential impact from natural disaster on individual properties, businesses and public facilities through increased awareness at the individual level and activities that can prevent property damage and loss of life from natural hazards.

**Goal #2: EDUCATION AND OUTREACH** by furthering the public's awareness and understanding of natural hazards and potential risk, including economic vulnerability and mitigation efforts.

**Goal #3: PREVENTATIVE ACTIONS** by incorporating information on known hazards and providing incentives to make hazard mitigation planning a priority in land use policies and decisions, including implementation of the NHMP.

**Goal #4: PARTNERSHIP AND COORDINATION** by identifying mitigation or risk reduction measures that address multiple areas (i.e. environment, transportation, telecommunications); coordinating public/private sector participation in planning and implementing mitigation projects throughout the City; and seeking funding and resource partnerships for future mitigation efforts.

**Goal #5: STRUCTURAL PROJECTS** by, when applicable, utilizing structural mitigation activities to minimize risks associated with natural hazards.

**Goal #6: NATURAL RESOURCE PROTECTION** by preserving and rehabilitating natural systems to serve natural hazard mitigation functions (i.e. floodplains, wetlands, watersheds and urban interface areas).

**Goal #7: EMERGENCY SERVICES** by minimizing life safety issues through the promotion, strengthening and coordination of emergency response plans.

### **Action items**

Action items are defined activities or strategies meant to achieve the plan goals. The action items are organized below in a matrix, which lists all of the multi-hazard (actions that address more than one hazard) and hazard-specific action items included in the Mitigation Plan. The matrix identifies action items determined through meetings with the project steering committee, local, regional, state and federal programs, stakeholder input and public workshops attended by city residents. Activities within the matrix may be considered for funding through federal and state grant programs, and through the Federal Emergency Management Agency's Hazard Mitigation Grant Program, should funds be made available.

The matrix includes the following five elements to help clarify the plans for implementation of each action:

- Identification of the action item, including the type of hazard being addressed
- A brief explanation of the issue or concern being addressed.
- A priority designation of high (H), medium (M), or low (L) for each action item. An action item with a high priority is one that the City believes should be addressed as soon as possible, while an action item with a low priority is one that requires further evaluation or information before the City can implement the action.
- The timeline for action items is divided into short term and long-term activities. Short-term action items are activities which agencies and organizations are capable of implementing within their existing resources and authorities during a 1 to 2 year period. Long-term action items are actions that will require new or additional resources or authorities to implement, and those actions that will occur within 3 to 5 years.
- Identification of the plan goal(s) each action item addresses.

## Five Year Action Plan Matrix

Action Number	Mitigation Action	Problem Addressed	Priority	Resources	Timeline	Plan Goals Addressed						
						Protect Life & Property	Education & Outreach	Preventative Actions	Partnership & Coordination	Structural Projects	Natural Resource Protection	Emergency Services
Multi-Hazard Mitigation Action Items												
1	Partner to provide public education and training for hazard mitigation	Limited staff prevents public education	M	Combined	Long Term		✓		✓			✓
2	Evaluate and streamline the process for providing information to the public when a hazard is occurring	Delays in providing public information	M	Existing	Short Term		✓		✓			✓
3	Evaluate equipment required by emergency response personnel	Emergency response personnel not “self contained”	H	Existing	Short Term	✓		✓				✓
4	Develop data to support a more in depth evaluation of the potential impacts of hazards.	NHMP currently supported by qualitative analysis only	H	Existing	Short Term	✓		✓	✓			
5	Evaluate evacuation routes from the City and identify an alternative to improve the current situation	Limited routes exiting the City could pose a problem for evacuation.	H	New	Long Term	✓		✓		✓		✓
6	Conduct a system wide evaluation of the City water system to identify specific issues that could occur during a hazard event.	Adverse impacts to the City water system	H	Combined	Long Term	✓		✓	✓	✓		✓

Action Number	Mitigation Action	Problem Addressed	Priority	Resources	Timeline	Plan Goals Addressed						
						Protect Life & Property	Education & Outreach	Preventative Actions	Partnership & Coordination	Structural Projects	Natural Resource Protection	Emergency Services
Flood Mitigation Action Items												
1	Analyze options to mitigate development in the flood plain that is repeatedly damaged	Repeated flooding of property resulting in damage.	H	Combined	Short Term	✓		✓	✓	✓	✓	✓
2	Evaluate alternative water supply crossings	Potential damage to water supply line from flooding	H	Combined	Short Term	✓		✓		✓		✓
3	Identify surface water drainage obstructions for all parts of the City	Localized flooding from storm runoff	H	Combined	Short Term	✓		✓		✓		
Windstorm Mitigation Action Items												
1	Implement programs to avoid damage from trees during windstorms	Falling trees commonly damage power lines and other property	H	Combined	Short Term	✓		✓	✓		✓	
2	Enhance strategies for tree management	Old and damaged trees pose a risk	H	Combined	Short Term	✓		✓		✓	✓	
Wildfire Mitigation Action Items												
1	Increase communication, coordination, and collaboration between stakeholders	Increasing number of homes built adjacent to shrub-step open areas.	M	Combined	Short Term	✓	✓	✓	✓			✓
2	Develop a detailed WUI and wildfire hazard assessment	Increasing potential for damage from wildfire	M	Combined	Short Term	✓	✓	✓				✓
3	Encourage implementation of wildfire mitigation activities	Increased probability of wildfire in the Yakima River delta and the Amon Creek drainage.	M	Combined	Long Term	✓		✓		✓		
Severe Winter Storms Mitigation Action Items												
1	Develop programs to coordinate activities aimed at reducing the risk to the public infrastructure	Damage to public utilities such as power lines from fallen trees	M	Combined	Long Term	✓		✓	✓	✓		✓
2	Increase public awareness of mitigation activities	Lack of public knowledge of activities to reduce risk	M	Combined	Short Term	✓	✓	✓				✓
Landslide Mitigation Action Items												
1	Improve Knowledge of Landslide Hazard Areas	Lack of public awareness and economic risk associated with building failures	M	Combined	Short Term	✓	✓	✓				

Action Number	Mitigation Action	Problem Addressed	Priority	Resources	Timeline	Plan Goals Addressed						
						Protect Life & Property	Education & Outreach	Preventative Actions	Partnership & Coordination	Structural Projects	Natural Resource Protection	Emergency Services
2	Badger Mountain Slope Evaluation	Case by case evaluation potentially causes inconsistencies between decisions. No programmatic position available to form basis for future development decisions.	M	Combined	Long Term	✓	✓		✓			
<b>Earthquake Mitigation Action Items</b>												
1	Wastewater Treatment Plant Improvements – Chlorine Gas Cylinders	Potential damage to chlorine gas cylinders	H	Combined	Short Term	✓		✓		✓		
<b>Volcanic Eruption Mitigation Action Items</b>												
1	Strengthen response and recovery programs and implement public education programs.	Limited information exists within the community that will allow citizens to react in a timely and appropriate fashion should a volcanic hazard impact the City.	M	Combined	Long Term	✓	✓	✓	✓			✓

## Plan Organization

The NHMP contains a five-year action plan, background on the purpose and methodology used to develop the Mitigation Plan, information on business preparedness, and sections on seven natural hazards that occur in the City of Richland.

**Executive Summary and Five-Year Action Plan Matrix** provides an overview of plan goals, and focuses on the short and long-term action items presented in the Plan. These action items address multi-hazard issues, as well as hazard-specific activities that can be implemented to reduce risk and prevent loss from future natural hazard events.

**Section 1: Mitigation Plan Introduction** describes the background and purpose of developing the Mitigation Plan for the City of Richland.

**Section 2: Community Profile** paints a portrait of the history, landscape, demographics and socio-economics of the City of Richland. This section also provides a historical perspective on natural hazards in the City.

**Section 3: Risk Assessment** describes the process of evaluating potential losses to the City of Richland that will have to be done on all the hazards that are identified in the Hazard Mitigation Plan

**Section 4: Multi-Hazard Goals and Action Items** provides information on the process used to develop the multi-hazard action items that cut across the seven natural hazards addressed in the Mitigation Plan.

**Section 5: Hazards** include hazards that recur with some regularity such as *Floods, Landslides, Wildfires, Severe Winter Storms and Windstorms* and hazards that recur infrequently but with devastating and far-reaching affect, like *Earthquakes and Volcanic Eruptions*. Each of the hazard sections includes information on the background of the hazard, hazard assessment, community issues, mitigation goals and action items, and the local, state and national resources relevant to that hazard.

**Section 6: Plan Maintenance** provides information on the review and update process for the Hazard Mitigation Plan.

**Section 7: Appendices** includes specific information on the various *public processes (Appendix A)* used during the development of the Mitigation Plan. Other appendices include a resource directory of City, regional, state and national resources and programs that may be of assistance to City of Richland during implementation of this plan (*Appendix B*); background information on the *Business Preparedness Assessment (Appendix C)* and the *GIS Analyses (Appendix D)*; an *Economic Analysis of Natural Hazard Mitigation Projects (Appendix E)* explaining FEMA's requirements, as well as techniques for applying benefit cost analysis in implementing specific hazard risk reduction strategies; as well as a list of the *Acronyms (Appendix F)* used in the plan.

## Participation in Plan Development

The NHMP is the result of a collaborative effort between Richland's citizens, public agencies, non-profit organizations, the private sector, and regional and state organizations. Public outreach, and information from the public, played an important role in identifying the natural hazards of most concern to the City's numerous stakeholders, and in developing the Plan's goals and proposed mitigation actions. Interviews were conducted with stakeholders across the City that have various interests and varying responsibilities should a disaster occur, in addition to a meeting being held with Richland service providers and interactive presentations being made to local service organizations. A public workshop was also held to include City residents in the Plan's development. In addition, a project Steering Committee helped to guide the Plan's development. The Committee was comprised of representatives from the City and cooperating agencies including:

- a) Community and Development Services Group
  - Community Development Services
    - Planning and Development Services, Business and Economic Development, Housing and Redevelopment, and Permitting Services
  - Parks and Recreation
- b) Utilities and Public Works Group
  - Energy Services
    - Power Operations, Systems/Meter Reading, Electrical Engineering, and Resource Management
  - Public Works
    - Water/Sewer, Solid Waste, Roads/Streets, Civil Engineering, Stormwater, and Transportation
- c) Public Safety Group

- Police Services
- Fire and Emergency Services
- d) Administrative Services
- 1) City Management
  - Public Information Office
- f) Benton County Emergency Services

Each of these representatives has a unique role to play in maintaining the City of Richland's critical facilities or providing services should a hazardous event occur. The City of Richland's Steering Committee will participate in the formal review and monitoring of and updates to the NHMP, and be responsible for coordinating implementation of mitigation action items. The City of Richland's NHMP will be adopted by the City Council. Following the Plan's adoption, the Director of Public Works (or his/her designee) will serve as Plan Manager to facilitate the Committee meetings, and assign tasks such as updating and presenting the Plan to the members of the committee. Plan implementation and evaluation will be a shared responsibility among all of the members of the committee appointed or approved by the City Manager.

## **Long Term Monitoring / Plan Maintenance**

In accordance with FEMA requirements, hazard mitigation plans must be monitored, evaluated and updated on a five-year cycle, including a review on incorporating the Mitigation Plan into comprehensive or capital improvement plans. The plan must be submitted to the Washington Emergency Management Division and the Federal Emergency Management Agency for review once every 5-years. Monitoring, evaluation and modification of the Richland NHMP will occur in two ways – annual reviews of the plan by the Plan Manager and five-year updates of the Plan. The Plan Manager will initiate both review processes and will be responsible for assuring an Annual NHMP Status Report is submitted to the City Council.

The annual review by the Plan Manager is intended to take advantage of opportunities to integrate the plan with ongoing City projects, promote the timely application for grant monies and identify reasonable actions that can be taken to implement the plan. In addition, the annual review by the Plan Manager provides the opportunity to incorporate comments or requests for revision of the plan that has been provided to the Plan Manager throughout the year, and adjust the plan based on observations during a hazard event, if necessary. For the five year review the Plan Manager will facilitate evaluation of the Plan by the Steering Committee, evaluate the progress related to implementation of mitigation actions, update the plan as necessary, submit the revised Plan to the Steering Committee, present the revised plan to the City Council, and notify all holders of the NHMP when changes have been made.

The City of Richland is dedicated to involving the public in long term maintenance of the NHMP. The Plan Manager will ensure that the public has the opportunity to provide feedback about the Plan during the 5-year reviews and during annual reviews as approved by the City Manager. The Plan will be made available to the public in electronic form on the City's internet site, and in hardcopy at the City Library. In addition, hard copies will be available from the Plan Manager. The Plan Manager will provide the public with an e-mail address and telephone number that can be used to submit their comments and concerns about the plan. Public meetings will be arranged by the Plan Manager as requested by the public, when there is appropriate reason to do so, and as approved by the City Manager. The meetings will provide the public a forum for which they can express their concerns, opinions, or ideas about the Plan. The City Public Information Office will be responsible for using City resources to publicize the public meetings and maintain public involvement through the government access channel, web page, and newsletters.

Further information regarding this Plan can be obtained from:

City of Richland , Department of Public Works  
Natural Hazards Mitigation Plan Manager  
Address: PO Box 190  
840 Northgate Drive  
Richland, WA 99352  
Phone: (509) 942-7500

City of Richland website  
<http://www.ci.richland.wa.us>